

**Follow-up Audit
Kansas City Street Lighting
Costs and Funding Alternatives**

August 2000

**City Auditor's Office
City of Kansas City, Missouri**

August 2, 2000

Honorable Mayor and Members of the City Council:

This follow-up audit of the city's streetlight program was initiated by the city auditor pursuant to Article II, Section 13 of the city charter. Our 1993 audit found that the city's street lighting system was inadequate. Although the Public Works Department estimated that Kansas City had only about half the number of streetlights needed to meet national lighting standards, we found that the city could not afford to upgrade its streetlight system under the existing Kansas City Power & Light (KCPL) lease. We recommended that the city continue to pursue purchasing the system or, at least, to obtain a more favorable lease arrangement.

Since the original audit, the city negotiated a new agreement with KCPL. The agreement, which included a bond package approved by the voters in April 1997, provided for the city's purchase of the KCPL system, lower rates to KCPL-powered lights, expansion and upgrade of the system, and maintenance. The four-year project is expected to be completed by December 2001.

Our follow-up audit found that street lighting has improved significantly under the expansion and upgrade program. Improved areas have more lights, lighting is brighter overall, and the light is more evenly distributed. According to our 2000 citizen survey, 74 percent of those respondents who reported living in areas with new street lighting were satisfied with street lighting, compared with only 46 percent of those reporting that they do not have new lighting.

We also found that the city's cost per streetlight will be reduced by almost one-third, due in part to more efficient lights and lower power rates. Although the total cost of operating the system is higher, the number of streetlights will almost double.

Finally, we found that elements of a long-term maintenance plan are in place or being developed. A complete inventory and condition assessment of the lighting system is required by new financial reporting standards that go into effect in fiscal year 2003. Improved reporting on infrastructure, including street lighting, increases accountability for capital maintenance and furthers the City Council's priority of infrastructure preservation.

The draft follow-up audit was sent to the city manager and the director of Public Works on June 14, 2000. The director of Public Works' response is included as an appendix. We appreciate the courtesy and cooperation extended to us during this project by Public Works staff. The audit team for this project was Martin Tennant and Michael Eglinski.

Mark Funkhouser
City Auditor

Follow-up Audit: Kansas City Street Lighting Costs and Funding Alternatives

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Follow-up Audit: Kansas City Street Lighting Costs and Funding Alternatives

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Introduction

Objectives

This follow-up audit of Kansas City street lighting costs and funding alternatives was conducted pursuant to Article II, Section 13 of the Charter of Kansas City, Missouri, which establishes the Office of the City Auditor and outlines the city auditor's primary duties.

A performance audit is an objective, systematic examination of evidence to independently assess the performance of a government organization, program, activity, or function in order to provide information to improve public accountability and facilitate decision-making.¹ A follow-up audit is an examination for the purpose of reporting on the extent to which an agency has dealt with problems identified in a prior audit.

This follow-up audit was designed to answer the following questions:

- Will the streetlight project provide improved lighting?
- How do current and projected street lighting costs compare to costs under the prior system?
- Has progress been made to provide long-term system maintenance?

Scope and Methodology

This follow-up audit is not designed nor intended to be another full-scale audit of Kansas City street lighting. Rather, it is designed to determine progress made by the Public Works Department in improving the effectiveness and the economy of the street lighting system. This follow-up audit was performed in accordance with generally accepted government auditing standards, with the exception of the completion of an external quality control review of the office within the last three years.²

The city auditor participated in negotiations on the city's behalf to purchase and improve the street lighting system. He was on a team that

¹ Comptroller General of the United States, *Government Auditing Standards* (Washington, DC: U.S. Government Printing Office, 1994), p. 14.

² The last review was performed in April 1995. A peer review is planned for the current year.

selected a consultant for the city, participated in discussions with city staff on how the system should be designed to meet city needs, and reviewed various documents with city project teams. The city auditor's participation in these meetings could be perceived as having influenced his opinions and judgments of the streetlight system. We disclose this information to comply with government auditing standards, which require auditors to be independent, to be considered independent, and to report any impairment to independence in the scope section of the audit.

Our methods for this follow-up report included:

- Reviewing professional literature on capital maintenance plans.
- Reviewing the current four-year street lighting agreement with Kansas City Power and Light (KCPL) and the city's plans for ongoing system maintenance.
- Reviewing national and local electricity rates.
- Reviewing records of system costs, prior audit work, and subsequent ARTS reports.
- Interviewing managers and staff who oversee the city's street lighting system and the current expansion and upgrade project.

No information was omitted from this report because it was deemed privileged or confidential.

Background

Since the original audit was released, the city has begun to expand and upgrade the streetlight system. The city is upgrading about 40,000 previously leased KCPL lights, is buying about 33,000 lights newly installed by KCPL, and has bought about 1,800 lights from Missouri Public Service (MOPub).

On January 23, 1997, City Council approved a new streetlight agreement with KCPL.³ Most of the agreement was contingent on voter approval of

³ Ordinance Number 961654.

\$110 million in streetlight bonds. The bond proposal was approved in an April 1, 1997, election.⁴ The agreement provided for purchase of the existing system for \$21.5 million, lower power rates to KCPL-powered lights, expansion and upgrade of the entire system for \$71.2 million, and system maintenance for \$33 per pole per year.⁵

In October 1999, the city purchased 1,833 leased lights from MOPub for almost \$1.8 million. These lights are located in far northern, eastern, and southern parts of the city. By the completion of the project, the city will own all the lights in the streetlight system.

Exhibit 1. Inventory of Streetlights with Completion of the Project

Lights upgraded	40,055
New lights added	33,000
Already city owned	8,000
Purchased from MOPub	1,833
Total lights	82,888

Source: Department of Public Works' Project Summary.

Summary of the 1993 Audit

Our February 1993 performance audit, *Kansas City Street Lighting Costs and Funding Alternatives*, identified needed improvements in the conditions under which the city could lease, purchase, expand, and maintain its street lighting system. We recommended that the city: reject Kansas City Power and Light's lease and sale offers; examine options to establish its own system; negotiate more favorable terms with KCPL; streamline utility billing and payment methods; and designate a utility monitor within the Public Works' Engineering Division.

The original recommendations are included in Appendix A. Audit Report Tracking System (ARTS) reports are included in Appendix B.

⁴ Ordinance Number 961653.

⁵ "A Streetlight Agreement Between the City of Kansas City, Missouri and Kansas City Power & Light Company", January 7, 1997.

Findings and Recommendations

Summary

Lighting of city streets and sidewalks has improved significantly through an ongoing streetlight expansion and upgrade project administered by the Public Works Department. The primary contractor is Kansas City Power and Light (KCPL). The four-year project is scheduled for completion in December 2001. When the project is completed, the city will own all of the lights in the streetlight system, and will substantially meet national lighting standards. The old system was below standards.

Improved lighting efficiency and lower power rates under the new program will contribute to a one-third reduction in the cost of operating a typical light. Overall operating costs are higher, however, because the number of streetlights has increased. By the time the program is complete, the number of streetlights will almost double.

The Public Works Department has made progress on developing a long-term maintenance plan. Inventory records are being developed, budget projections have been made, and performance standards are included in the agreement with KCPL. An up-to-date streetlight inventory and condition assessment will help assess the condition of the streetlight system and estimate maintenance needs.

Streetlight Project Has Significantly Improved Lighting

The current citywide street lighting project will bring most of the city's lighting up to modern standards. Our 1993 audit found that the city had about half the lights it needed in order to meet modern lighting standards. The 2000 citizen survey shows greater satisfaction with new street lighting even though the streetlight project will not be completed until December 2001.

The New System Is Designed and Built to Meet Lighting Standards

The agreement between the city and KCPL requires that design and construction satisfy national lighting standards for streets and sidewalks. Kansas City's lighting project is based on roadway lighting criteria

established by the Illuminating Engineering Society of North America (IES)⁶ and approved by the American National Standards Institute. IES criteria describe methods for calculating proper lighting levels and require uniformity of lighting so that light is evenly spread over streets and sidewalks.

Not all city streetlights are included in the project but their lighting is generally adequate. Some lights are not included in the upgrade and expansion. Together, these lights will represent about 12 percent of the total inventory at the conclusion of the project. These lights are:

- **Lights purchased from MOPub.** These are lights located in the partially rural MOPub service area on the perimeter of the city. Public Works Department staff report that all these lights have modern high pressure sodium vapor lamps but that they may be spaced further apart than current IES standards in some cases.
- **Original city-owned lights.** These lights are located mostly downtown, in the Hospital Hill area, and in new subdivisions. Public Works Department staff report that many areas lit by the originally city-owned lights are within range of national lighting standards. Although they may provide sufficient light, 10 percent of these lights still use older, less efficient mercury vapor lamps.

Citizens are satisfied with improved lighting. Although the streetlight project was not complete at the time the citizen survey was conducted in February 2000, the survey results showed greater satisfaction with street lighting among citizens who report they live in an area with new street lighting. Of respondents reporting they live in an area with new street lighting, 74 percent said they were satisfied with city street lighting. In contrast, 46 percent of those reporting that they do not have new street lighting said they were satisfied with city street lighting.⁷

⁶ The IES is a professional organization that disseminates knowledge and technical information dealing with lighting research, design, and applications. The IES also produces standard practice documents for applying proper lighting techniques.

⁷ 2000 *Kansas City Citizen Survey*, Office of the City Auditor, Kansas City, Missouri, April 2000, Executive Summary, p. 4.

Photographs show how lighting has improved. The photographs on the following pages show lighting conditions before and after improvements resulting from the current streetlight project. Improved areas have more lights, lighting is brighter overall, and the light is more evenly distributed. The photographs were provided by the Public Works' Streetlight Section. They were used in a presentation to the Roadway Lighting Committee of the IES in March 1999, after which the city received a design award for the project

Exhibit 2. Photographs of Lighting Improvements Showing More Light Poles, Brighter Lighting, and More Evenly Distributed Light.



Old lights.
Paseo, south
of 60th Street.



New lights.
Paseo, north
of 55th Street.



Old lights.
44th Street,
between Park
and Brooklyn.



New lights.
Same view as
above.

New Lights Cost Less to Operate

More efficient lighting equipment and lower power rates combine to provide a more cost-effective streetlight system. Although the per light cost is less, the total cost of the new system is higher, since the total number of streetlights will almost double.

Cost Per Light Will Decrease for Most Lights

The total annual cost to operate each new light is about \$130, or almost one-third less than what it cost under the previous lease.⁸ This lower cost includes the expense of financing and maintaining the new system.

The former lease included the cost of system maintenance, which was performed by KCPL. When the project is complete, all the lights in the streetlight system will be city-owned, and maintenance will be competitively bid.

The most common size and type of lamp used in the city's street lighting system is a 100-watt high-pressure sodium vapor (HPS) lamp. These lamps will comprise about 75 percent of the new system and will cost about 32 percent less to operate overall. (See Exhibit 3.)

Exhibit 3. Total Annual Cost Per HPS 100W Light

Year	Lamp	Cost/Light	% reduction
1993 (leased)	100W HPS	\$190	
2000 (city-owned)	100W HPS	\$130	32%

Sources: *Kansas City Street Lighting Costs and Funding Alternatives*, Kansas City Auditor's Office, February 1993, and Appendix C.

The city's new lights are more efficient. Improved efficiency of the new lights contributes to cost savings. The most common type of light in the new system requires about 14 percent less energy than the same size and type of lamp before the upgrade. (See Exhibit 4.)

Exhibit 4. Efficiency Improvement, 100W HPS Lights

Year	Lamp size	Ballast Loss (Watts)	Total Watts	Percent Improvement
1993	100W HPS	29	129	
2000	100W HPS	11	111	14%

Source: Public Works' reports, based on equipment tests.

The installation of more efficient ballasts allows the same size HPS lamps to provide the same amount of light using less electricity. The

⁸ See Appendix C for cost calculations.

ballast is an electronic device connected to each lamp that provides a current boost to start the lamp and then regulates the current for continued light production. Each lamp's ballast consumes power that is lost in the form of heat.

The city's streetlight program manager estimated that the city will pay \$250,000 less for electricity each year than it would have using the former leased system's less efficient ballasts. This power savings estimate assumes the same power rate and the same number of lights, with more efficient ballasts as the only difference.

Power rates are lower. Two electric utilities provide power to the city's streetlights in separate areas of the city. Rates charged by both have declined since the original audit in 1993. (See Exhibit 5.) National rates have also declined in the same period.⁹

Exhibit 5. Unmetered Streetlight Rates (cents/kwh)

Service Provider	1993	2000	Percent Change 1993-2000
KCPL	4.823	4.60	-4.6%
MOPub	5.170	3.78	-26.9%

Sources: *Kansas City Street Lighting Costs and Funding Alternatives*, Office of the City Auditor, Kansas City, Missouri, February, 1993; "A Streetlight Agreement Between the City of Kansas City, Missouri and Kansas City Power & Light Company", January 7, 1997; and Ordinance 990110.

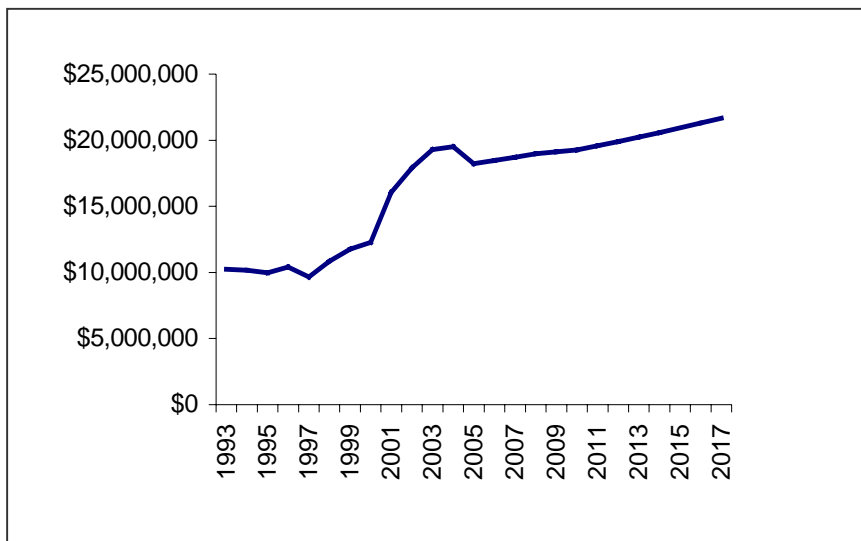
Total Expenditures Increase with an Expanded System

Although the annual cost of individual lights is lower, total street lighting expenditures are higher because the new system will be much larger in order to provide improved lighting. With completion of the expansion and upgrade project, the city will have about 83,000 lights in its entire system compared to about 45,000 lights in 1993.

Prior to the construction project, city street lighting expenditures were about \$10 million per year. With completion of the project in fiscal year 2002, annual city expenditures will be about \$18 million per year. Costs are projected to then rise gradually due to increasing energy and maintenance costs. (See Exhibit 6.)

⁹ Department of Energy average retail prices of electricity including residential, commercial and industrial declined 4.3 percent between 1993 and 2000.

Exhibit 6. Street Lighting Program Expenditures



Sources: FY 1993 through FY 2001, Adopted Budgets and the city's debt manual. After FY 2001, Public Works Street Lighting Section projections.

Elements of a Long-Term Maintenance Plan Are in Place

The Public Works Department has made progress in developing a long-term system maintenance plan. Elements of such a plan include a complete inventory, budget projections, and maintenance performance standards. Managers need these elements in order to put capital maintenance resources to their best use. New accounting reporting requirements will soon require cities to report maintenance activity and the condition of major assets. This information will help the department preserve the city's infrastructure in a cost-effective manner.

Maintenance Planning Elements Are in Place

In order to monitor system status and determine maintenance requirements, the Public Works Department needs information on the condition, maintenance, and cost of streetlights. These elements are either in place or the department is in the process of developing them.

A centralized inventory is being developed. The department is in the process of recording information on the street lighting system's inventory, condition and maintenance history. Inventories are used to track maintenance costs per light, to prepare budgets and to explain program needs to the public and to City Council.

The KCPL construction agreement requires KCPL to provide the city with technical drawings along with the attributes of upgraded and newly installed lights in the city's inventory. As required, this information is provided in printed and electronic form. The drawings are being added to the city's Geographic Information System (GIS) database. The GIS provides links between individual lights, their attributes and other infrastructure related to the street system.

A budget has been developed. Public Works and the Office of Management and Budget have developed projections that anticipate future system costs, maintenance needs and funding. Budget projections allow managers to predict costs over the life of the system so the city can plan for sufficient maintenance funding.

Maintenance performance criteria are included in the agreement. Performance standards in the agreement with KCPL help the city assign responsibility and meet certain objectives. KCPL is required to provide maintenance service guarantees over the term of the project. Each year, the city pays KCPL a \$33 maintenance fee for each light in the city's total inventory. KCPL is required to maintain a 24-hour customer service phone line, perform night patrolling to spot problems, use a computerized maintenance management records system, and resolve incidents such as pole knock-downs and lamp outages within a certain period of time. If response times exceed the guarantees, the city receives cash credits against the maintenance fee.

The agreement also provides inspection and testing of streetlights before they are approved. City inspectors must determine that the construction, wiring and function of the lights in a specific area are acceptable. After the city approves and accepts the work, the city pays KCPL and takes ownership of the upgraded hardware and newly installed lights.

New Financial Reporting Rules Require More Complete Information on the Condition of the City's Infrastructure

Beginning in fiscal year 2003, the city will be required to provide additional financial reporting on its infrastructure, including the streetlight system.¹⁰ The new requirements will help ensure proper maintenance of the streetlights by making city government more accountable for the condition of its infrastructure.

¹⁰ Governmental Accounting Standards Board (GASB), Statement No. 34 regarding infrastructure reporting requirements. GASB establishes accounting principles and financial reporting standards for state and local government entities.

New Infrastructure Reporting Requirements

The new financial reporting standards will require the city to either calculate depreciation of the streetlights or report on the actual condition and maintenance of the streetlights (modified approach). In order to use the modified approach, the city must:

- Have an up-to-date inventory of the streetlight system.
- Assess the condition of the streetlights and summarize the results of the assessment.
- Estimate the amount needed to maintain and preserve the streetlights at a condition level established by the city.
- Document that the street lighting system's condition is preserved at or above the level established by the city.

Source: Stephen J. Gautier, *An Elected Official's Guide to The New Governmental Financial Reporting Model* (Chicago: Government Finance Officers' Association, 2000), p. 69.

Reporting of maintenance and condition help ensure proper

maintenance. Information that the city would be required to report under the modified approach can help system managers and show the results of maintenance. This approach provides practical information on inventory and system conditions that traditional depreciation calculation does not. Under the modified approach, city officials would define an expected level of maintenance for the street lighting system overall. The city would have to document that the streetlights were being maintained at the expected level.

City staff would be able to use the inventory and the condition assessments provided under the modified approach to plan their maintenance work. Staff could better demonstrate maintenance needs and the success of their maintenance efforts to City Council.

More complete reporting will help address City Council priorities.

Although the city has a history of deferred maintenance, infrastructure maintenance has been a City Council priority in recent years. The additional information that the new reporting standards require can make the streetlight maintenance and preservation program more visible. As a result, city government will be more accountable for the condition of the streetlights to taxpayers, businesses, bond rating agencies, creditors, and investors.

Because the new reporting standards provide greater accountability and greater assurance for adequate maintenance, we have withdrawn our 1993 recommendation for a dedicated source of streetlight maintenance

funding. More realistic accounting of system condition and of maintenance requirements can help serve the purpose of dedicated funding, while avoiding dedicated funding's negative effects on budget flexibility.

The director of Public Works should report the maintenance activity, maintenance needs, and condition of the streetlights using the modified approach in order to meet the Governmental Accounting Standards Board's new financial reporting requirements.

Recommendation

1. The director of Public Works should report the maintenance activity, maintenance needs, and condition of the street lighting system using the modified approach in order to meet new financial reporting requirements of the Governmental Accounting Standards Board's Statement Number 34.

Other Issues: Streetlight Inventory Records

During the course of the follow-up audit, we identified two issues that were beyond the scope of the audit, but which may warrant additional work.

Are additional plans and resources needed to record all the city's streetlights in the new centralized database?

Public Works is recording the 73,000 lights in the KCPL project in the city's geographic-based information system (GIS) in order to locate individual lights and to provide links to information about each light and about other city infrastructure. Some of the 8,000 lights owned by the city before the project and the 1,800 lights purchased from MoPUB are not yet recorded.

An inventory of streetlights is used to monitor the lights' condition, to manage maintenance and to determine what will be needed to maintain the system in the future.

An analysis of the department's plans to complete the streetlights database might examine whether additional plans and resources are needed to include all the city's streetlights.

Should the Public Works Department take further action in order to assure that the streetlight database contains adequate maintenance information?

The city's streetlight database should contain information on each light in the inventory sufficient for the department to provide adequate maintenance and to anticipate future maintenance needs. KCPL's construction contractor provides the Public Works Department with progress reports, technical drawings of completed construction, a record of the attributes of new and upgraded streetlights, and on-line access to view individual maintenance work orders. However, several city staff involved with the streetlight project told us that additional information would improve their ability to monitor the system and manage its maintenance.

An analysis of information about the lights would determine what information Public Works needs, and what the department should do to obtain additional information.

Appendix A

Prior Audit Recommendations

Prior Audit Recommendations

1. We recommend the City Manager and the Streetlight Steering Committee reject the October 1992 KCP&L sale lease proposals and continue to pursue strategies to upgrade the KCP&L street lighting system.
 - A. Approach KCP&L officers again to seek their cooperation in reaching a reasonable purchase price that serves the City's interests as well as KCP&L's.
 - B. Alternatively, negotiate a lease agreement that will enable the City to upgrade the street lighting system. Rates should reflect the off-peak nature of street lighting.
 2. We recommend the City Manager and the Streetlight Steering Committee obtain an option from the Law Department regarding the City's authority to construct and operate a parallel street lighting system.
 3. We recommend the City Manager and the Streetlight Steering Committee:
 - A. Examine the feasibility of a streetlight assessment program in Kansas City, to help finance needed upgrades of the streetlight system and reduce the increasing demand of the Street Lighting program on the General Fund.
 - B. Obtain an opinion from the Law Department regarding the extent and kind of legislative action that would be required to establish a street lighting assessment system in Kansas City.
 4. We recommend that the Director of Public Works encourage the rapid development of the utility engineer function in the Engineering Division, to monitor utilities and represent the City in PSC rate hearings, as mandated by the Administrative Code.
 5. We recommend the City Manager:
 - A. Work with the Finance Department and KCP&L to devise a way to transfer the City's utility gross receipts tax amounts internally.
 - B. Seek a commitment from KCP&L to cooperate with the City in automating or otherwise streamlining the City's KCP&L bill payment process.
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Appendix B

Audit Report Tracking System (ARTS) Reports

Audit Report Tracking System		Page 1 of 2																					
1. Audit Title <div style="border: 1px solid black; padding: 2px;">Kansas City Street Lighting</div>	2. This Report Date <div style="border: 1px solid black; padding: 2px;">August 25, 1993</div>																						
3. Department <div style="border: 1px solid black; padding: 2px;">Public Works</div>	4. Last Report Date <div style="border: 1px solid black; padding: 2px;">First Report</div>																						
5. Department Head <div style="border: 1px solid black; padding: 2px;">George L. Satterlee</div>	6. Contact Person/Phone <div style="border: 1px solid black; padding: 2px;">Maher Khan / 274-1460</div>																						
7. Audit Release Date <div style="border: 1px solid black; padding: 2px;">February 22, 1993</div>	8. ARTS Number <div style="border: 1px solid black; padding: 2px;">93-2-1</div>																						
9. Status of All Audit Recommendations																							
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5A. Not Implemented	8/25/93																						
5B. Not Implemented	8/25/93																						
Status	Date																						
10. Recommendations Included in this Report																							
<p>Recommendation No. 1: Reject the October 1992 KCP&L sale and lease proposals and continue to pursue strategies to upgrade the KCP&L street lighting system.</p> <p>A. Approach KCP&L officers again to seek their cooperation in reaching a reasonable purchase price that serves the City's interests as well as KCP&L's.</p> <p>B. Alternatively, negotiate a lease agreement that will enable the City to upgrade the street lighting system. Rates should reflect the off-peak nature of street lighting.</p> <p>Description of Status: In Progress. KCP&L's October 1992 sale and lease proposal was rejected.</p> <p>A. Upon City Manager Olson's direction, we did not pursue the purchase option.</p> <p>B. A conceptual agreement for leased streetlights was concluded in mid-April this year with KCP&L and was recommended for finalization in the City Manager's letter of May 5, 1993 to the Mayor and Council.</p> <p>The text of the conceptual agreement has been reviewed by the Law Department and is near to final form pending direction from the City Council and Manager of how to proceed.</p> <p>We understand the Citizen's Budget Review Commission is about to release their recommendations concerning the leased street light system.</p>																							

Audit Report Tracking System		Page 2 of 2
Audit Title:	Kansas City Street Lighting	
Report Date:	August 25, 1993	
10. Recommendations Included in this Report (continued)		
<p>Recommendation No. 2 Obtain an opinion from the Law Department regarding the City's authority to construct and operate a parallel street lighting system.</p> <p>Description of Status: Implemented</p> <p>We are presently operating a parallel street lighting system. If we stop leasing KCPL lights we would be required to notify the Missouri Public Service Commission (PSC) and compensate KCP&L in accordance with current PSC tariffs.</p>		
<p>Recommendation No. 3</p> <ul style="list-style-type: none"> A. Examine the feasibility of a street light assessment program in Kansas City, to help finance the increasing demand of the street light program on the General Fund. B. Obtain an opinion from the Law Department regarding the extent and kind of legislative action that would be required to establish a street light assessment system in Kansas City. <p>Description of Status: Implemented</p> <ul style="list-style-type: none"> A. It is feasible to expand and operate the street lighting system on special assessment basis only if a charter change is made as explained in the attached memo dated March 16, 1993. B. The Law Department opinion is contained in the attached memo dated July 21, 1993. 		
<p>Recommendation No. 4 We recommend that the Director of Public Works encourage the rapid development of the utility engineer function in the Engineering Division, to monitor utilities and represent the City in PSC hearings, as mandated by the Administrative code.</p> <p>Description of Status: Implemented</p> <p>Engineering Division designated Mr. Maher Khan as Franchise Liaison Engineer on January 25, 1993 and assigned him duties related to monitoring all public utilities. Mr. Khan is on mailing list of the Missouri Public Service Commission and receives notices and mailings from them regularly.</p>		
<p>Recommendation No. 5 We Recommend the City Manager:</p> <ul style="list-style-type: none"> A. Work with the Finance Department and KCP&L to devise a way to transfer the City's utility gross receipts tax amounts internally. B. Seek a commitment from KCP&L to cooperate with the City in automating or otherwise streamlining the City's KCP&L bill payment process. <p>Description of Status: Not Implemented</p> <p>Both issues were broached to KCP&L during negotiations reported under Recommendation No. 1. While changes recommended by the City Auditor would be beneficial to the City both in terms of revenue and efficiency they would result in more work for KCP&L. Therefore KCP&L declined to make the suggested changes to their billing practices. As progress is made toward electronic transfers these recommendations may become more palatable to KCP&L. The Finance Department will continue to negotiate for a more equitable solution to the concerns mentioned by the City Auditor but does not expect a quick resolution.</p>		



Inter-Departmental Communication

DATE March 16, 1993
 TO Jeff Hancock, Assistant City Manager
 FROM Walter O'Toole, Assistant City Attorney
 SUBJECT Assessment of Street Lights

The summary on pages 30 and 31 of the auditor's report appears to be a fair statement of the situation. This is not a new question and I am attaching copies of opinions from 1971 and 1977 which conclude that our right to assess street lights is not clear under the present provisions of the Charter. The problem is that Charter Section 240 specifically identifies all the major elements of street work but it doesn't mention street lights. Therefore a court could hold that they were not intended to be included. Street lights are specifically mentioned in other sections of the Charter, e.g. Section 1(14), where they are treated separately from streets which appear in Section 1(15).

If we start to erect street lights on a special assessment basis and a court later decides that the assessments are not valid, the entire cost of the lights installed will fall on the general fund. If we are to start a program to assess the cost of installing street lights, we would recommend that we change the Charter to make the authority explicit or else have an early test case on our authority to do it, before the City's financial exposure is too great.

As for authority to assess maintenance and operating costs, there is none. We would need to change the Charter to authorize such assessments.

I should point out there is clear authority to assess construction of street lights under the Neighborhood Improvement District law; but that procedure would be very cumbersome for a city-wide program.

Walter O'Toole
 Assistant City Attorney

WJO:tl

cc: Richard Ward
 George Satterlee
 Maher Khan



Inter-Departmental Communication

DATE July 21, 1993
TO Mark Funkhouser, City Auditor
FROM Walt O'Toole, 28th Floor, Ext 2412
SUBJECT Streetlight Assessment Utility or Enterprise Fund

This is in response to your memo of July 7, about establishing such a utility or fund. Your questions along with the responses are as follows.

- 3.3.
1. Assuming City ownership of the system, what action, including changes to the charter or Administrative Code, would be needed to adopt a streetlight assessment program?

There is no one answer to how assessments for streetlights could be established; different persons would likely come up with different approaches. This is mine.

There is no provision of our charter at the present time which would allow the assessment of streetlight costs. Although special assessments/taxes on only those properties receiving a particular service are common, I don't find any appellate authority that is directly in point with regard to assessment of streetlight costs, in general, and of electricity, in particular. Nevertheless, if the cost of the electricity is one of the various costs of providing street lighting service and street lighting is a benefit received by certain properties but not others, then assessment of the properties receiving lighting seems analogous to our boulevard taxes (Charter Sections 60 and 62), our trafficway taxes (Charter Section 356), and the levee maintenance assessments (Charter Section 341) which the Charter authorizes but which I don't think we have ever used.

The general power of the City to levy and collect special taxes is clear (Charter Sections 1(1) and 371). My examination of the Missouri constitution and statutes does not reveal any provisions which would prevent us from establishing a system of assessing streetlight costs. I would suggest that we change the charter section on public improvements to include streetlights and pedestrian lights and then add a section to the charter, along the lines of Charter Section 62 (which establishes the boulevard front foot tax) to provide for a special assessment on properties abutting lighted streets on the basis of the special benefit that those properties receive. I believe that this could be done without any enabling legislation, only a charter change.

Mark Funkhouser
July 21, 1993
Page Two

The precise language necessary could not be drafted until the proposed method of assessment was decided. There is a lot of flexibility in methods of assessment; so long as it is a real attempt to approximate the benefits received by the various properties.

2. Assuming City ownership of the system, what action, including changes to the charter or Administrative Code, would be needed to operate the streetlight system as an enterprise fund?

We could operate the streetlight system as an enterprise fund simply by electing to do so and changing our accounting system accordingly. We can also impose the requirement either by ordinance or by charter change. The most binding way would be to draft the charter change establishing the tax so that it is similar to Charter Section 60 and requires that a specific use be made of the proceeds of the assessments.

3. Are there any statutes or other regulations that would prohibit Kansas City from operating a utility-owned streetlight system as either an assessment district or an enterprise fund?

This is another area where I don't find any cases that address your specific question; but the service that is being provided is illuminating the streets. I don't know of any reason why we can't do it by leasing equipment. If we are going to do it that way, we would want to be careful to have language in the charter change that covers it. The considerations on an enterprise fund would be the same as with an owned system.

Walt O'Toole
Assistant City Attorney

WJO:tl

cc: Kathleen Hauser

Audit Report Tracking System

1. Audit Title	2. This Report Date
Kansas City Street Lighting	February 25, 1994
3. Department	4. Last Report Date
Public Works	August 25, 1993
5. Department Head	6. Contact Person/Phone
George E. Wolf Jr.	Maher Khan / 274-1460
7. Audit Release Date	8. ARTS Number
February 22, 1993	93-2-2

9. Status of All Audit Recommendations

<u>Status</u>	<u>Date</u>	<u>Status</u>	<u>Date</u>
1. Implemented	2/25/94		
1A. Implemented	2/25/94		
1B. Implemented	2/25/94		
2. Implemented	8/25/93		
3A. Implemented	8/25/93		
3B. Implemented	8/25/93		
4. Implemented	8/25/93		
5A. Not Implemented	8/25/93		
5B. Not Implemented	8/25/93		

10. Recommendations Included in this Report

Recommendation No. 1: Reject the October 1992 KCP&L sale and lease proposals and continue to pursue strategies to upgrade the KCP&L street lighting system.

- A. Approach KCP&L officers again to seek their cooperation in reaching a reasonable purchase price that serves the City's interests as well as KCP&L's.**
- B. Alternatively, negotiate a lease agreement that will enable the City to upgrade the street lighting system. Rates should reflect the off-peak nature of street lighting.**

Description of Status: Implemented

- 1 KCP&L's October, 1992 Sale and Lease Proposal was Rejected.
- 1-A. Upon City Manager Olson's direction, we did not pursue the purchase option.
- 1-B. A conceptual agreement for leased streetlights was concluded in mid-April 1993 with KCP&L and was recommended for finalization in the City Manager's letter of May 5, 1993 to the Mayor and Council.

On September 1, 1993 the Citizens Budget Review Commission presented their recommendations to the City Council and recommended the appointment of a Citizens Blue Ribbon Commission to negotiate with KCP&L for purchase of the KCP&L owned leased street lights.

By passage of Second Committee Substitute for Resolution No.931047 on October 21, 1993 the City Council established a five member Citizens Blue Ribbon Commission to review the street lighting proposal of the Citizens Budget Review Commission and the City Auditor's report and advise the Council of the best option.

Audit Report Tracking System		Page 2 of 2
Audit Title:	Kansas City Street Lighting	
Report Date:	February 25, 1994	
10. Recommendations Included in this Report (continued)		
<p>On December 30, 1993 City Council appointed five citizens to the Blue Ribbon Commission by Resolution No. 931453. (copies of both Resolutions attached)</p> <p>The Resolutions require that the Blue Ribbon Commission, with the help of a consultant, make a report to the Rules and Audit Committee. The initial and final reports are to be submitted within forty five (45) and ninety (90) days respectively after selection of the consultant.</p> <p>We are waiting to hear from the Blue Ribbon Commission with input for the selection of a consultant and understand the Commission members are reviewing the various reports but have not scheduled their first meeting as of this date.</p> <p>This concludes our response to the Street Lighting Performance Audit . All further action will be at the direction of the City Council.</p>		

SECOND COMMITTEE SUBSTITUTE FOR RESOLUTION NO. 931047

Providing for establishment of a blue ribbon commission of citizens to review reports on street light funding and to recommend a course of action to the City Council.

WHEREAS, various studies have recently been made relating to Kansas City's need to install additional street lights and to minimize the cost of such installation as well as the ongoing cost of power and maintenance; and

WHEREAS, the Council believes that the maximum progress can be made toward such end by the use of a panel of citizens, representing a cross section of the citizenry, to analyze the alternatives proposed, to recommend which way to proceed to the City Council; NOW, THEREFORE,

BE IT RESOLVED BY THE COUNCIL OF KANSAS CITY:

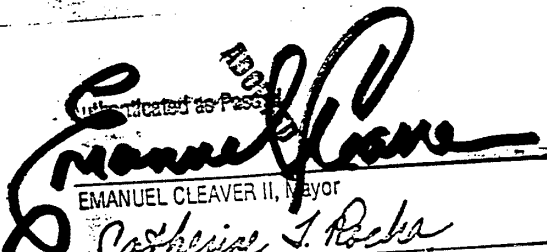
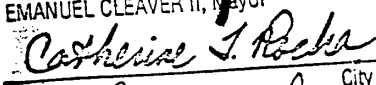
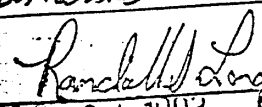
Section 1. That there is hereby established a blue ribbon commission of five citizens to review the City Street Lighting Proposal of the Citizens Budget Review Commission, the report of the City Auditor titled Kansas City Street Lighting Costs and Funding Alternatives and the applicable legal opinions, to recommend which option to pursue.

Section 2. That the members of the commission shall be appointed by the Mayor subject to the approval of the City Council.

Section 3. That the commission shall be assisted by members of the City staff and others who shall be designated by the Mayor and approved by the City Council.

Section 4. That the City Manager is directed to proceed with a request for proposals from the appropriate consultants to be available to assist the blue ribbon commission and City Council during this process.

Section 5. That, following the appointment of the commission and the hiring of the consultant, the blue ribbon commission and consultant will make an initial report to the Rules and Audit Committee within forty five (45) days and a final report and recommendation to the City Council within ninety (90) days.

RECEIVED
Authenticated to Pass

EMANUEL CLEAVER II, Mayor

Catherine J. Rocha
City Clerk

By Randall D. Long
Deputy City Clerk
OCT 21 1993

RESOLUTION NO. 931453

Approving to the appointment of certain individuals to the Blue Ribbon Commission of Citizens to review reports on streetlight funding and to recommend a course of action to the City Council.

WHEREAS, the City Council has adopted Second Committee Substitute for Resolution No. 931047 establishing a Blue Ribbon Commission to review the City street lighting proposal of the Citizens Budget Review Commission, the report of the City Auditor entitled Kansas City Street Lighting Costs and Funding Alternatives, and the applicable legal opinions to recommend an option to pursue; and

WHEREAS, the appointment of the members to the Commission shall be designated by the Mayor and approved by the City Council; and

WHEREAS, the Mayor has designated certain named individuals to serve on the Blue Ribbon Commission; NOW, THEREFORE,

BE IT RESOLVED BY THE COUNCIL OF KANSAS CITY:

That the following individuals designated by the Mayor are hereby approved by the City Council to serve on the Blue Ribbon Commission of Citizens: James Nutter, Kay Waldo Barnes, Chris Medina, Bill Washington and Lillian McKittrick.

Authenticated as Resolved

EMANUEL CLEAVER II, Mayor

City Clerk

By

DEC 30 1993

Deputy City Clerk

Appendix C

Cost Calculation Methods

Total Annual Cost to Own and Operate a 100 Watt HPS Streetlight

It costs the city about \$130 to own and operate a single 100 watt HPS streetlight. The cost includes electric power, maintenance, depreciation, and financing costs.

Annual Streetlight Cost

Cost Component	Cost
Electric power	\$23.16
Maintenance	33.00
Depreciation	60.55
Financing	13.02
TOTAL	\$129.73

Electric power

The electric power cost is based on a 100 watt HPS lamp with an 11 watt ballast loss running for 4100 hours per year and a power rate of \$0.0458/kwh. The power rate is a weighted average of the rates from MOPub and KCPL. The MOPub rate is \$0.0378/kwh and the KCPL rate is \$0.046/kwh. The weights are based on the number of MOPub and KCPL lights in the city's streetlight system.

Maintenance

The city currently pays KCPL \$33/year to maintain a streetlight.

Depreciation

The depreciation cost includes the cost to purchase one newly completed streetlight from KCPL, the city's cost to provide the hardware to KCPL, and the average cost to trim trees and excavate rock as part of the construction project. We used a 20-year straight-line depreciation formula. The cost of purchasing a new light from KCPL is \$645.63. The city provides KCPL with the hardware for new lights. The city's hardware cost for a 100 watt HSP light is \$59.40. The average rock excavation cost is \$64.43 per light and the average tree trimming cost is \$141.61 per light.

Financing

The financing cost includes bond financing costs for the bonds related to purchasing the MOPub and KCPL streetlights.

Appendix D

Director of Public Works' Response



Public Works Department

DATE: July 21, 2000

TO: Mark Funkhouser, City Auditor

FROM: George E. Wolf Jr., ACM / Director of Public Works

SUBJECT: Follow-up Audit on Streetlights

We have reviewed your revised draft of the "Follow-up Audit on Streetlights."

We agree with your recommendation that "The director of Public Works should report the maintenance activity, maintenance needs and condition of the street lighting system using the modified approach in order to meet new financial reporting requirements of the Governmental Accounting Standards Board's Statement Number 34."

We have particularly enjoyed working with you and your staff on this audit. Using your 1993 audit as a launching pad, we are well on the way to completing what I consider to be one of the most significant public works projects in my tenure with Public Works. This project has a positive impact on every citizen of Kansas City on almost a daily basis. Your original audit enabled this project to happen.